WHAT IS CLAIMED IS:

1. A method of searching digital communication signals in a system, the method comprising:

combining a plurality of channel measurements;

providing output of the combining of channel measurements as an added input to the plurality of channel measurements; and

acquiring a signal symbol based on results from the combining of channel measurements without addressing all timing hypothesis individually via a correlation operation.

2. The method of claim 1, wherein the combining comprises subjecting an input S_1 and an input S_2 to obtain an output S_T using a combining operation defined by the equation:

$$S_T = \ln\left(\frac{\frac{e^{S_1+S_2}}{(1+e^{S_1})(1+e^{S_2})} + \frac{e^{-(S_1+S_2)}}{(1+e^{-S_1})(1+e^{-S_2})}}{\frac{e^{S_1-S_2}}{(1+e^{S_1})(1+e^{-S_2})} + \frac{e^{-(S_1-S_2)}}{(1+e^{-S_1})(1+e^{S_2})}}\right).$$

3. The method of claim 2, wherein the output S_T becomes an input for another combining operation.

4. The method of claim 1, further comprising multiplying a received chip by a channel reliability factor and providing the product as a channel measurement.

5. The method of claim 4, wherein the channel reliability factor is determined using:

$$R = 4\left(\frac{Ec}{No}\right)\left[\frac{1}{\sqrt{Ec}}\right]$$

where R is the channel reliability factor.

6. The method of claim 1, wherein the plurality of channel measurements comprises channel measurements S_{n-1} through S_{n-15} where n is an iteration number and spacing of the measurements is 1 chip.

7. The method of claim 1, wherein determining acquisition of a signal symbol based on results from the combining of channel measurements comprises detecting results from the combining of channel measurements that exceed a predetermined threshold.

8. The method of claim 7, wherein the predetermined threshold is programmable.

9. A method of performing a number of correlations against hypothesized PN sequences from digital communication signals in a system including a plurality of buffers, the method comprising:

separating digital communication samples into a plurality of sample groups;

performing partial sums on the plurality of sample groups; and

combining results of the performed partial sums to obtain a correlation.

10. The method of claim 9, wherein performing partial sums on the plurality of sample groups comprises rotating and combining all combinations of the plurality of sample groups.

11. The method of claim 10, wherein rotating and combining all combinations comprises rotating each sample by all 4 possible phases of a single PN chip, combining for 16 possible combinations for every pair of samples.

12. The method of claim 9, wherein the additions of results from each of the addition permutations comprises a coherent combining.

13. A method of searching digital communication signals in a system including a plurality of buffers, the method comprising

locating digital samples in an even phase group of sample buffers or an odd phase group of sample buffers based on the phase of a particular digital sample;

providing digital samples from the even phase group of sample buffers or the odd phase group of sample buffers to a demodulator as needed by the demodulator; and

providing digital samples from the even phase group of sample buffers or the odd phase group of sample buffers to a searcher when not needed by the demodulator.

14. The method of claim 13, further comprising entering a power down state upon performing a sufficient number of correlations.

15. The method of claim 14, further comprising leaving the power down state when a new block of data is available.